

REMARKS

The sole issue raised in the official action is whether the invention as claimed in any claim is obvious over Lehmborg US Patent 5,952,023.

The Supreme Court has pointed out that:

[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *KSR International Co. v. Teleflex, Inc.* 550 U.S. 398 82 USPQ2d 1385 (2007) .

The examiner notes that the cited reference differs from the invention as claimed as to use of a solvent and drying but jumps to the conclusion that these differences are obvious. It does not.

The two processes are very different. The present invention provides dried processed tea leaves containing original solids materials from the leaf. Lehnerg provides instant tea which is made by drying an extract which is obtained by enzymatic extraction of desired components from the tea leaf, the solids materials of the leaf being discarded. As is clear from column 2 lines 54 - 55 and claim 12 of Lehmborg, the tea leaves which are submitted to this extraction process have already been fermented (note Lehmborg describes conventional black tea preparation at column 1 lines 40 - 56 as including fermentation immediately after withering).

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It is important to note that in conventional black tea preparation, “fermentation” is the result of the action of enzymes that are naturally present not added enzymes.

For convenience two brief descriptions of black tea preparation are set below so that the differences between the present invention and the conventional process and Lehmberg’s process can be better understood.

The first description is from United States Patent 6,348,224

In the manufacture of black tea, young leaves usually 2-3 leaves and a bud are plucked and withered for about 12-24 hours to reduce moisture and to bring about desirable chemical/Biochemical changes. Withering process allows certain chemical and biochemical changes to occur and also the moisture content of the leaves is brought down from 90% to 50-70%. The tea leaves are then macerated using a Cut-tear-and curl machine (CTC machine) or rolled using rollers. This disrupts the cellular integrity of leaf tissues and allows oxidation of catechins by enzyme polyphenol oxidase which results in the development of colour pigments i.e. theaflavin and thearubigins. The macerated leaves are fermented for a suitable time and then fired at a high temperature to stop the enzyme activity.

The second is from an article entitled “Monitoring of black tea fermentation process using electronic nose” by Nabarun Bhattachayya, Sohan Seth Bipan Tudu, Pradip Tamuly, Arun Jana, Devdulal Ghosh, Rajib Bandyopadhy and Manabendra

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http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6T8J-4M93NY2-3&_user=10&_rdoc=1&_fmt=&_orig=search&_sort=d&_docanchor=&view=c&_searchStrId=942233276&_rerunOrigin=google&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=fb0ecef130428c9c5b48793c04e8ec2e (visited on June 28, 2009). The description reads as follows:

Black tea fermentation is essentially an oxidation process. After the plucked tea leaves are treated by series of processes called withering (removal of moisture by air flow), pre-conditioning and CTC (essentially maceration and cutting of leaves), the leaves are subjected to the process of fermentation by exposing them to air by laying the cut tea leaves on floor, trough or moving conveyor under controlled temperature, humidity and air-flow conditions. During this process, the leaves change colour from green to coppery brown and the grassy smell gets transformed to floral smell. It is critical that the leaves be allowed to ferment only up to the desired limit and both under and over fermentation result in deteriorated quality of black tea. Out of the two detectable parameters (colour and smell), smell is very important since a strong, very specific fragrance emanates from the leaves once leaves are optimally fermented

In the present invention, extraneous enzymes are added during the fermentation. This is not the case in conventional black tea fermentation nor is it the case with Lehmberg's process. Lehmberg is seeking to change what is extracted from tea solids to make his extract which can be evaporated to produce instant tea. The present invention uses enzymes to degrade lipids which are present naturally so that they do not later cause a bad taste.

Nothing in Lehmberg points to spraying of an enzyme on to tea leaves before

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or during fermentation. Lehmberg's enzymes are used later for a totally different purpose.

It is therefore submitted that the requirements of 35 USC 103 have been met.

In view of the foregoing, it is submitted that this application is in order for allowance and an early action to this end is respectfully solicited.

Respectfully submitted,



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